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By Russ Carnahan, St. Louis Post-Dispatch

Nearly two years ago, I sponsored a green building conference to bring together area builders, environmentalists and regional leaders to discuss the potential environmental and economic impact that green buildings could have in the St. Louis area. As our nation and region continues on the road to recovery, we have a real opportunity to make lasting investments in our nation's future by rethinking our built environment and investing in the creation of high-performance buildings.

High-performance buildings are stronger, smarter and more efficient "green" buildings. The buildings incorporate the systems approach of energy efficiencies, water savings, use of recycled and recyclable materials, life-cycle analysis and other environmental attributes into designs that are accessible, secure, resilient and, in many cases, historically preserved.

The built environment has a larger impact on the overall environment than many people think. Each year, our homes, offices, schools and other buildings consume 70 percent of electricity and 60 percent of all raw materials in the United States. Through more efficient building practices and new technologies, we are beginning to address these problems in our built environment while creating new clean-energy jobs.

Most people are surprised when I tell them that 40 percent of the carbon dioxide emissions in the United States each year come from buildings. That's about the same as the combined carbon emissions of Japan, France and the United Kingdom.

Not only do we have the opportunity to improve the environment for future generations, but we also have the opportunity to create thousands of construction and manufacturing clean-energy jobs here in the United States. This is a real opportunity for American entrepreneurs to put their ingenuity to work so that the United States becomes the world's leader in creating, manufacturing and implementing these technologies.

Legislation that passed the House earlier this year calls for the implementation of new technology in our schools to boost our economy now and in the future. Missouri alone would receive approximately \$97.8 million in funding to improve the energy efficiency of school buildings and make them more reliant on renewable sources of energy. The Economic Policy Institute calculated that the legislation's construction funding would support as many as 136,000 new jobs nationwide — many in areas that will give workers the valuable skills they need to

excel in a clean-energy economy.

In addition to creating valuable jobs right here in the United States, we reduce our energy consumption and carbon footprint. We save both water and raw materials. We prevent demolition and construction debris from going to landfills. Many materials can be used and reused time and again.

Through a new and more sustainable approach to designing, constructing and operating new buildings and retrofitting and operating older buildings, we can address and reduce the numerous and varied environmental, climate, health and economic effects that result from homes and buildings. High-performance buildings are designed to decrease consumption, also decreasing the cost of the building over its lifetime.

In all areas of building — residential, commercial or government — there exists a barrier between initial construction costs and lifetime maintenance costs. A builder may have the choice between two air-conditioning systems: a less efficient but initially cheaper one or a more-efficient but initially more expensive unit. The costlier one saves money and energy over the long run. Unless the builder is planning on occupying the building, it does not make economic sense to invest in the more efficient system.

This is beginning to change. Within the building community, there is a willingness to address these concerns. Still, as consumers, we are responsible for what we buy. As the public begins to hear more and more about the environmental and economic benefits of high-performance buildings, we will begin to see a real shift in the demand for buildings to be retrofitted and constructed with energy efficiency in mind.

The retrofitting of existing buildings or the design and construction of new high-performance green buildings will have an enormous impact on the growth of our economy and on securing our energy independence.

U.S. Rep. Russ Carnahan, D-St. Louis, co-founded and co-chairs the Congressional High-Performance Buildings Caucus. June 15-19 is High-Performance Buildings Week.

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